

Abstract of the Disclosure

5 Different bands (C-band and L-band) are allotted
respectively to an upstream optical signal and a downstream
optical signal. In a transmission-path optical fiber for
Raman amplification, the C-band optical signal is amplified
by pumping light from a C-band pumping light source, and
the L-band optical signal is amplified by pumping light
from an L-band pumping light source. As a result of this
10 configuration, the optical signals are Raman-amplified
through backward pumping in both upstream and downstream
directions, whereby negative effects, which could be
exerted on the optical signals by forward pumping, can be
avoided.

15